this is not the case with the internal carotids, which supply the capillary areas of the brain. On the contrary, they continue to retain their elasticity, so that the blood-pressure remains normally higher than within the capillary area of any other organ in the body. The cerebral blood paths being thus kept open the brain tissue is better nourished than the others. FREEMAN.

Galvanization of the Brain.—J. F. Herrick, M.D. (*N. Y. Med. Jour.*, September 15, 1894.) Dr. H. A. Hare has stated that it is impossible to pass a current of electricity, such as is usually applied to the head, through the brain by means of electrodes applied to the cutaneous surface of the head, because the current follows the course offering the least resistance, and with the electrodes applied to opposite sides, that the course is through the skin and soft parts external to the cranium Dr. Herrick denies this, and says that from experiments made by himself to determine the resistance offered by bone as compared with other tissues (fresh beef, fat and fibrous tissue), muscle is the best conductor, and by far the poorest is fat and fibrous tissue. As the scalp is composed mostly of fibrous tissue and fat, we should expect to find it very resistant It is alleged that in the percutaneous application of electricity the epidermis offers 300 times the resistance that all the intervening tissues do, and that the more succulent tissues offer the least resistance; therefore the brain would be among the best conducting tissues of the body. Dr. Herrick says the thickness of both sides of the skull together is little more than half an inch, and this with, say, seven inches of less resisting brain tissue, cannot offer a greater total resistance than about ten inches of skin and fascia through which the current must pass in going around the cranium. From experiments which he made to determine whether the current passed through the brain or not, it would certainly appear that electric currents may and do pass through the brain when an electrode is applied to either side of the head.

FREEMAN.

PATHOLOGICAL,

Contributions to Muscular Pathology.—Fr. Schultze (*Deutsche Zeitschrift. f. Nervenheilkunde.*, Vol. vi., Parts I. and II.) Myokymie (muscular waving, especially in the lower extremities).

A healthy farmer, without hereditary taint, has been always well, excepting slight occasional attacks of headaches and diarrhœa. Following a physical overexertion the patient had to give up his work on account of painful spasms, tremor and tired feeling in the muscles of the lower extremities. On examination the somewhat voluminous muscles are in constant waving. Passive movements are accompanied by painful clonic contractions of the muscles of the calves and adductors of the thighs. Similar phenomena occur, though far less frequent, in the other muscles of the body. Occasionally, fibrillary twitchings can be noticed. Constant hyperidrosis of the lower extremities, even when naked, at a temperature of 16° R. The electrical examination of the gastrocnemius shows a tetanic contraction at a very weak current; otherwise the electrical reactions quite normal. The patient recovered under rest and the use of the prolonged warm bath.

Looking for analogies in the literature, the author finds similar cases reported by Talma in his paper, "Myotonia Acquisita," and by Kny in an article published in vol. xix., *Arch. f. Psych. u Nervenkrankheiten*: "Ueber ein dem Paramyoclonus (Friedreich) nahestehendes Krankheitsbild."

The cases of Talma show some analogy to the muscular cramps occurring in cholera morbus and Asiatica, because two of the cases had suffered from diarrhœa.

In his case the author believes to find a cause in dilatation of the veins of the lower limbs FRANKEL.

Contributions to the Pathology of Progressive Pseudo-Hypertrophy and Muscular Dystrophy. Schultze (loc. cit).

A review of eleven cases of muscular dystrophy, especially of the pseudo-hypertrophic type, which came under observation in the clinic of the author. In five cases the disease showed plainly the family character, occurring once in three brothers (two twins) and another time in two brothers. The disease began in the twins at the same time and had a different course, showing plainly the relationship of the different clinical forms of dystrophy. While one of the cases was the classical picture of a pseudo-hypertrophy, there was in the other a general atrophy, including some muscles of the face.

Two cases represented the form of juvenile dystrophy.

Regarding the muscles involved, the masseters were affected twice, once there was macroglossia, once the first interossei of both hands were atrophied, once hypertrophy of both scaleni antici majores. Once, a very rare occurrence, an extensive hypertrophy of the hand muscles. The electrical reactions proved normal in all the cases, excepting a partial De R. of the right deltoid in one case. As other points of clinical importance the author noticed a weak fixation of the caput humeri in the glenoid cavity and constriction of the deltoid muscles below the acromion.

Mentally, no marked changes were observed. Abnormalities of the skull and skeleton are to be seen quite often. FRANKEL.

Paralytic Dementia.—Henry J. Berkely (*Journal of Insanity*, January, 1895) reports on the pathological investigation of a comparatively recent case of paralytic dementia; that is, one that died in a comparatively early stage of the disease. He found no inflammation, but indications of the vascular origin of the trouble. He construes the course of the disease as follows:

1. A period in which the nerve structures begin to receive an insufficient supply of nutrient material from the blood, and in which the more active and recently acquired mental functions begin to fail; to which is added a certain degree of irritability, both muscular and mental.

2. A period in which the loss of nutrient material has become so pronounced that the starving tissues begin to feed on themselves; disturbed cellular metabolism results, which is clinically shown in the increased motor excitement and motor grandiose ideas.

3. A period in which the nutrient supply is so diminished and the tissue changes have become so far advanced that there is actual disintegration of the nerve cell and beginning overgrowth of the support substance, the stage of terminal dementia, and pronounced muscular paresis. PHELPS.

Restitution of Pathologically Changed Ganglionic Cells.—Proceedings of the Section of Nervous and Mental Disease of the Fifth Congress of Russian Physicians in remembrance of Pirogoff. Lubinow (*Newrologiczeski Wiestnik*, 1894, p. 113).

L. starved a dog for a period of ten days in such a manner that it lost from 20 to 30 per cent. of its bodily weight. Then a trepanation was performed, a small piece of brain tissue removed and examined. Then the animal was fed again so as to make it return to its normal condition. In the period of refeeding pieces of brain tissue were removed for examination four, six and one-half and eight weeks after the end of the starvation period, and each time a new trepanation opening was made.

The specimens were hardened in two per cent. potass. bichrom., and stained with carmine hematoxylin, Ehrlich's mixture and Merkel's mixture.